

Tuesday, April 11, 2017 2:20:10 PM

157696

Page 1

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 4/17/2017 **Start Qty:** 4.00

4

Cust Item ID:

Required Date: 4/18/2017 **Req'd Qty:** 4.00

4

Customer:

Reference: SCHEDULED/S

Approvals: Process Plan:  Date: APR 11 2017 T

Tooling: _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop ***NR2***

100	FLOW WATER JET	0.00		
100				
Waterjet	Memo	0.44	(4)	17/04/18
FLOW CNC Waterjet	1-Cut as per Dwg D3705			
	Dwg Rev: <u>E</u>			
	Prog Rev: <u>E</u>			
	***grain direction ***			
	2- Deburr if necessary			
110	QC2- Inspect parts off machine FAI/FAIB	0.00		
110				
QC	Memo	0.00	(4)	17/04/18
Quality Control				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Tuesday, April 11, 2017 2:20:10 PM

157696

Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Start Date: 4/17/2017 **Start Qty:** 4.00

4

Customer:

Required Date: 4/18/2017 **Req'd Qty:** 4.00

4

Reference: SCHEDULED/S

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

Work Order ID 157696

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157696

Page 3

Item ID: D3705-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cover Plate
Start Date: 4/17/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 4/18/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Identify as per dwg & Stock Location: <u>WA01</u>	0.00							
150									
Packaging	Memo	0.00							
Packaging	LOCATION: WA001								
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

DAS
21
9-86

APR 19 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

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Page 1

Work Order ID: 157696

157696

Parent Item: D3705-3

D3705-3

Parent Item Name: Cover Plate

Start Date: 4/17/2017

Required Date: 4/18/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 08-01-30 new issue EC verified by:DD
IPP Rev:B 09-01-09 rev.c as per dwg DD verified by:EC IPP Rev:C as
per dwg RevD DD 10.04.27 verified by:EC IPP REV:D 13.01.15 AS
PER DWG REV.E DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.080		Purchased	No			100	sf	213.2500	0.74	3.11579			

M6061T6S 080

6061-T6 .080 Sheet

04/17/04/18

Location

Loc Qty

Loc Code

MAT020

213.25

m135861

10.5

m136342

73.85

m136632

8.9

m137110

24

m137263

96

3.62

DQA: _____ Date: _____

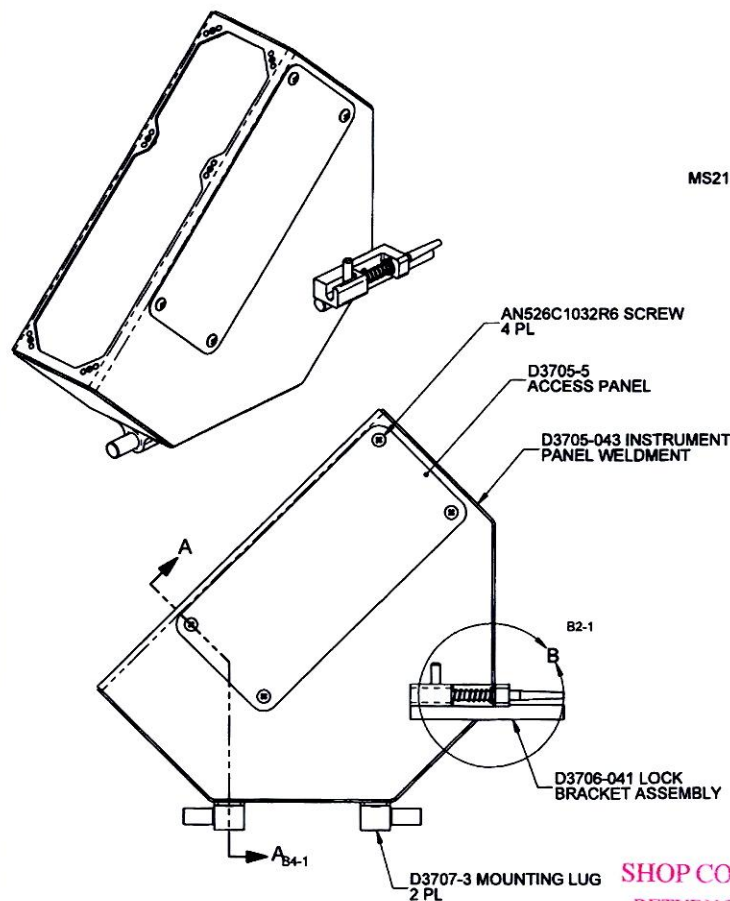


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



D3705-041 INSTRUMENT PANEL ASS'Y

D3705-041 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N AND B/N PER DART QSI 044 6.1 (PERMANENT INK MARKER)
- 7) WEIGHT: 3.20 lbs

MS21075L3 NUTPLATE
REF

AN526C1032R6 SCREW
4 PL

D3705-5
ACCESS PANEL

D3705-043 INSTRUMENT
PANEL WELDMENT

B2-1

D3706-041 LOCK
BRACKET ASSEMBLY

D3707-3 MOUNTING LUG
2 PL

SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 151696

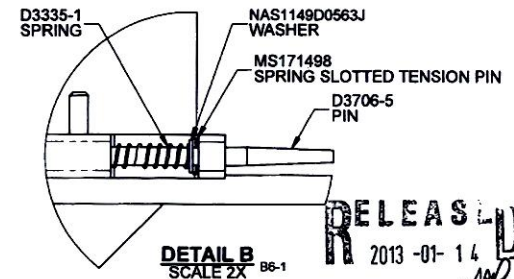
SECTION A-A
SCALE 2X

AN3-3A BOLT
NAS1149D0332J WASHER
2 PL

SECTION G-G
SCALE 2X

APR 11 2017

ITEM	QTY -041	P/N	DESCRIPTION
	X	D3705-041	INSTRUMENT PANEL ASS'Y
1	1	D3335-1	SPRING
2	1	D3705-043	INSTRUMENT PANEL WELDMENT
3	1	D3705-5	ACCESS PANEL
4	1	D3706-041	LOCK BRACKET ASSEMBLY
5	1	D3706-5	PIN
6	2	D3707-3	MOUNTING LUG
7	2	AN3-3A	BOLT
8	4	AN526C1032R6	SCREW
9	1	NAS1149D0563J	WASHER (OR AN960JD516)
10	28	CR1122-3-02.5	RIVET
11	1	MS171498	SPRING SLOTTED TENSION PIN
12	14	MS21075L3	NUT PLATE
13	4	MS24693C272	SCREW
14	2	NAS1149D0332J	WASHER (OR AN960JD10L)



E	REVISED D3705-1/3 (NOW 0.75 TALLER - AFFECTS -1F/-35); D3706-1/3 NOW D3706-041 AND BOLTED; ADD AN3-3A BOLT, NAS1149D0332J WASHER, D3706-041; 9.88 WAS 9.13 (ZN D1-3, B3-3, C7-4); 6.000 WAS 7.150 (ZN C4-6); 3.20 lbs WAS 3.00 lbs. REASON: CIR12-4/PART12-188.	MB	12.11.30
D	ITEM 14 WAS AN960JD416 (ZN D3-1 AND C1-1). REASON: NCR#10-017.	MB	10.04.15
C	ADDED D3705-7/8-11 (SHEET 6); REMOVED MS35589-156 GROMMET; 9.31 AND 12.88 WERE 9.38 AND 12.61 (ZN B6-3); 0.1.90 WAS 1.50 (ZN D5-4); ADDED 0.0.204 HOLE (ZN D5-4); CR1122-3-02.5 WAS MS20426AD3-3. REASON: COMPLETED DESIGN OF FACE PLATES REQUIRED TO MOUNT INSTRUMENTS.	MB	08.11.20
B	ADDED MS35489-156; QTY 14 MS21075L3 WAS QTY 8; QTY 28 MS20426AD3-3 WAS QTY 16; MS171498 WAS TP-2; AN526C1032R6 WAS MS27039-1-09 & AN960JD10L (ZN D3-1); REDESIGNED D3705-1F FLAT PATTERN (ZN B6-3). REASON: GIVE MORE FLEXIBILITY TO CUSTOMER IN TERMS OF INSTRUMENT ARRANGEMENT	MB	08.08.07
A	NEW ISSUE	MB	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.11.30		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3705** REV. E
SHEET 1 OF 6

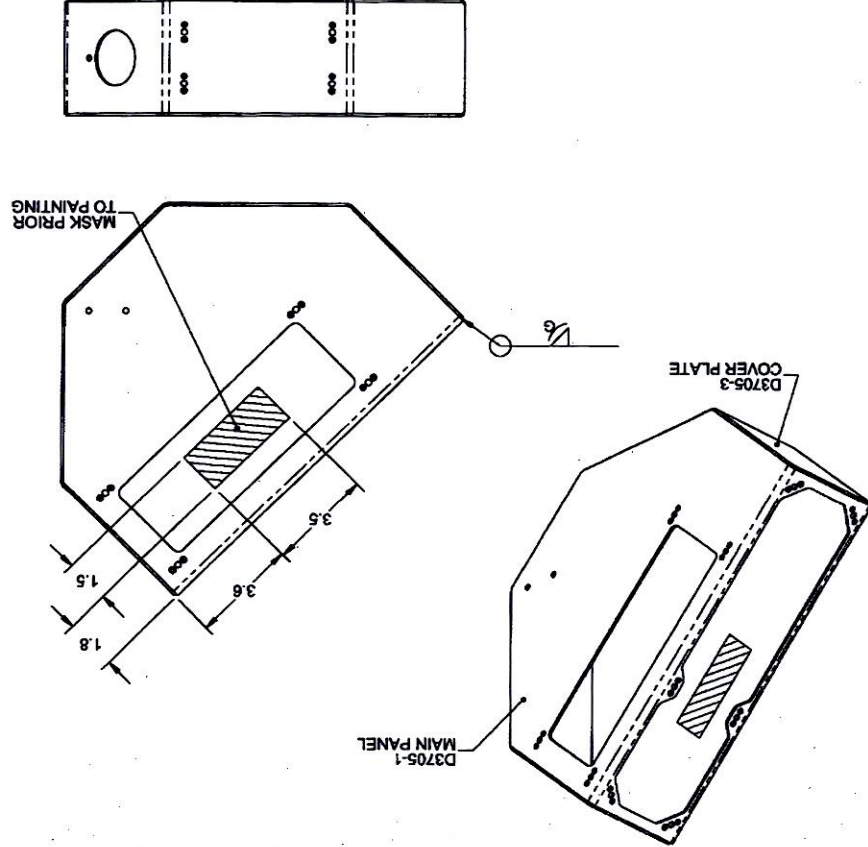
TITLE **INSTRUMENT PANEL ASS'Y** SCALE NTS

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D3705-043 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK: SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 3.20 lbs
- 8) WELDING: PER DART QSI 004

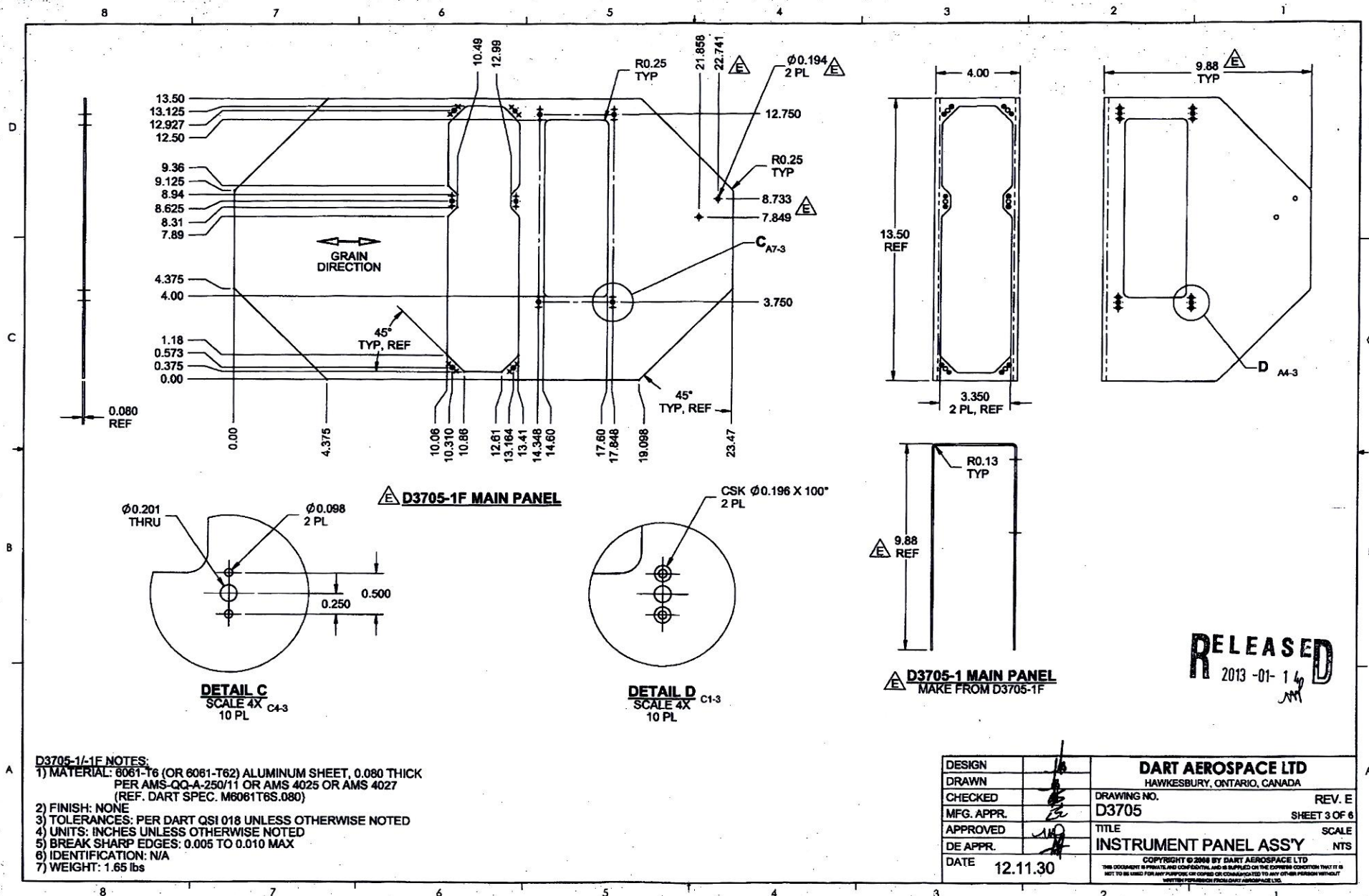
D3705-043 INSTRUMENT PANEL WELDMENT



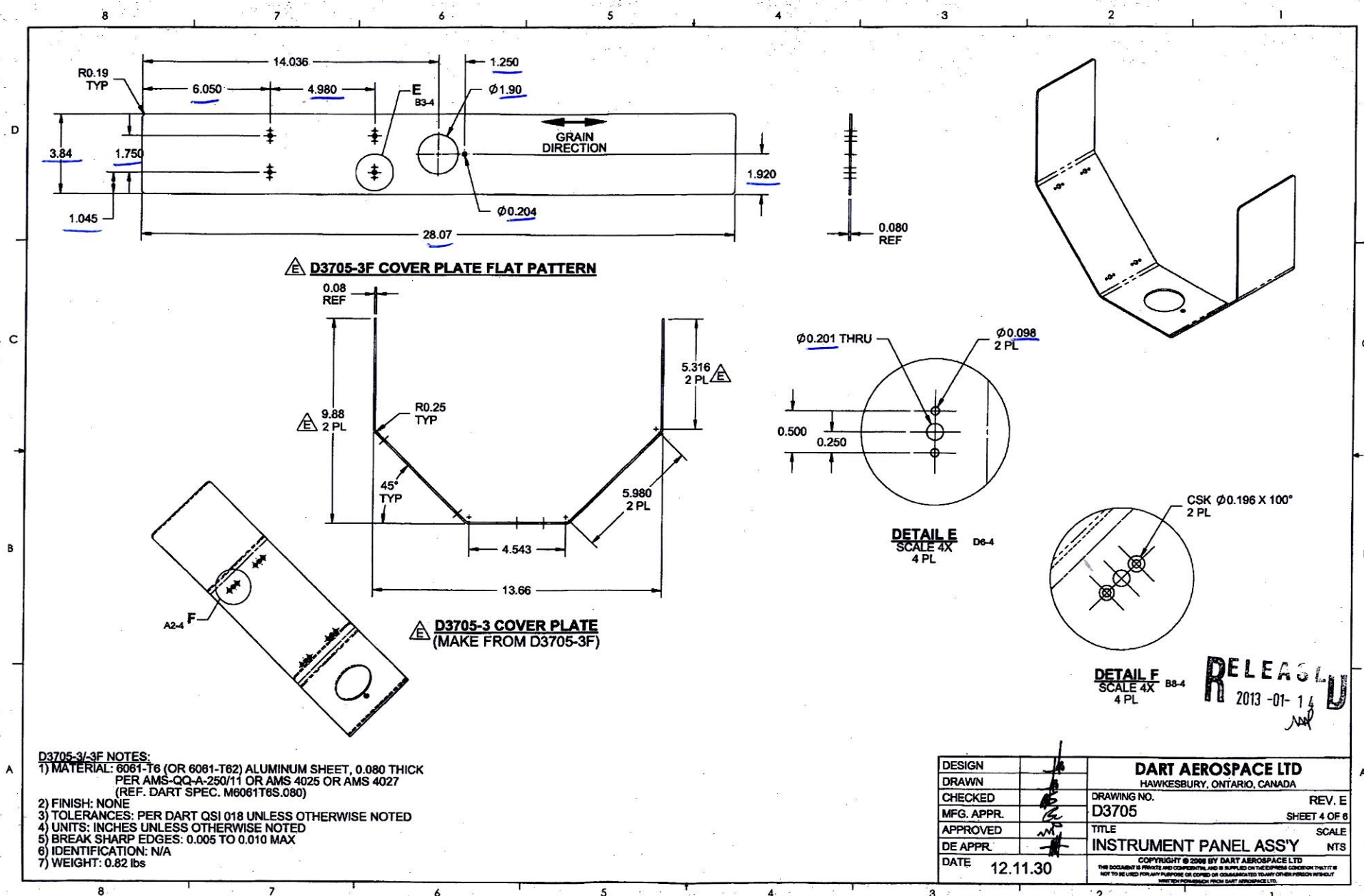
DESIGN		DATE	12.11.30
DRAWN		DE APPR.	
CHECKED		APPROVED	
MFG. APPR.		TITLE	INSTRUMENT PANEL ASSY
D3705		SCALE	NTS
DRAWING NO.		SHEET 2 OF 8	
DART AEROSPACE LTD		REV. E	
HAWKESBURY, ONTARIO, CANADA			

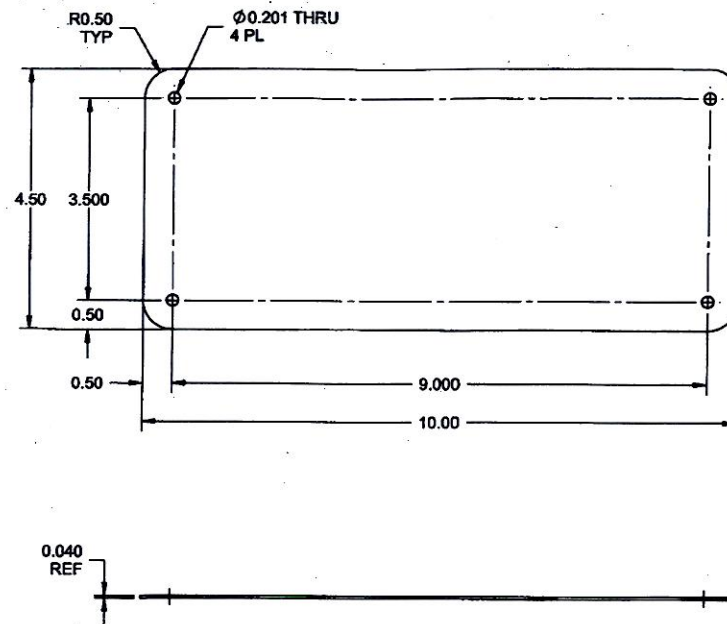
ITEM	QTY.	P/N	DESCRIPTION
1	X	D3705-043	INSTRUMENT PANEL WELDMENT
3	1	D3705-1	MAIN PANEL
4	1	D3705-3	COVER PLATE

RELEASED
2013-01-14



RELEASED
2013-01-14





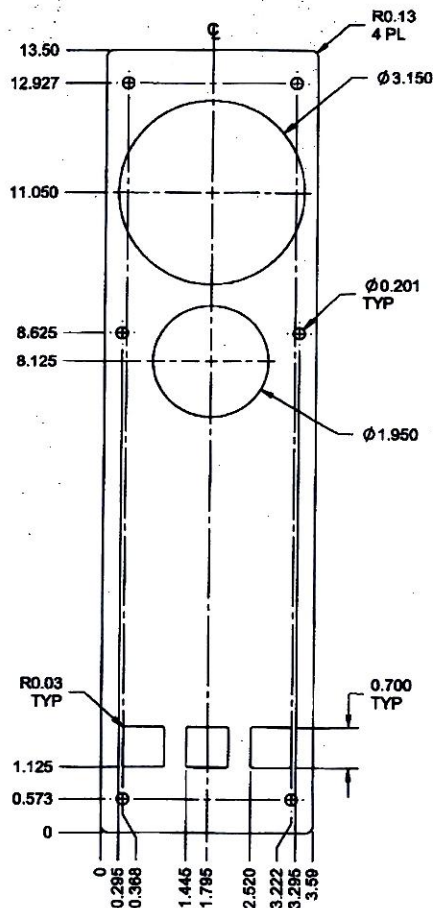
D3705-5 ACCESS PANEL

RELEASED
2013-01-14

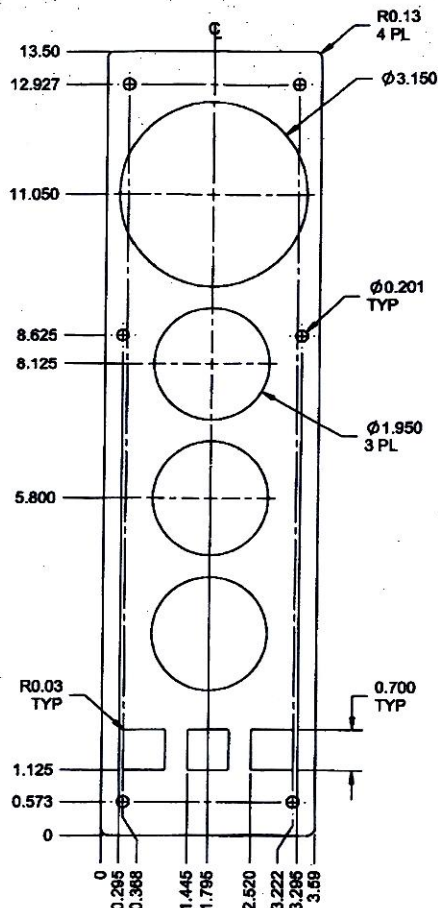
D3705-5 NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T82) ALUMINUM SHEET, 0.040 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027
(REF. DART SPEC. M6061T8S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT BLACK (4.3.5.7) PER DART QSI 005 4.3
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: IDENTIFY WITH DART P/N AND B/N PER DART QSI 044 6.1 (PERMANENT INK MARKER)
- 8) WEIGHT: 0.17 lbs

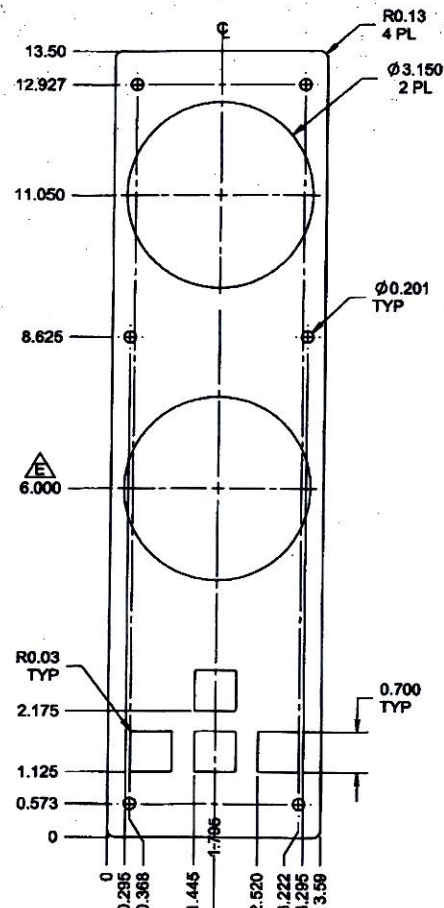
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3705	REV. E
MFG. APPR.		SHEET 5 OF 6	
APPROVED		TITLE	SCALE
DE APPR.		INSTRUMENT PANEL ASS'Y	NTS
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D3705-7 FACE PLATE



D3705-9 FACE PLATE



D3705-11 FACE PLATE



**SIDE VIEW
TYP**

D3705-7/-9/-11 NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.063 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027
(REF. DART SPEC. M8061T6S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT BLACK (4.3.5.7) PER DART QSI 005 4.3
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: IDENTIFY WITH DART P/N AND B/N PER DART QSI 044 6.1 (PERMANENT INK MARKER)
- 8) WEIGHT: D3705-7 = 0.22 lbs; D3705-9 = 0.18 lbs; D3705-11 = 0.19 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3705	SHEET 6 OF 6
APPROVED		TITLE	SCALE
DE APPR.		INSTRUMENT PANEL ASSY	NTS
DATE	12.11.30	COPYRIGHT © 2008 BY DART AEROSPACE LTD THE DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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2013-01-16
JMB

